WHAT IS CLAIMED IS:

1. A surface acoustic wave device, comprising:

a quartz substrate;

a piezoelectric thin film disposed on said quartz substrate;

comb electrodes disposed between said quartz substrate and said piezoelectric thin film; and

the normalized film thickness H/λ of said piezoelectric thin film is at least about 0.05, wherein the film thickness of said piezoelectric thin film is H, and the wavelength of a surface acoustic wave is λ.

2. A surface acoustic wave device in accordance with claim 1, wherein the normalized film thickness H/λ of said piezoelectric thin film is at least about 0.20.

3. A surface acoustic wave device in accordance with claim 1, wherein said piezoelectric thin film contacts at least one of said substrate and said comb electrodes at the negative surface thereof.

4. A surface acoustic wave device in accordance with any one of claim 1, further comprising a short-circuit electrode disposed on said piezoelectric thin film.

5. A surface acoustic wave device in accordance with claim 1, wherein the Euler angles of said quartz substrate are within the range such that the power flow angle PFA of a Rayleigh wave is within about ± 2.5°.

6. A surface acoustic wave device in accordance with claim 1, wherein the Euler angles of said quartz substrate are within the range such that the temperature coefficient of frequency TCF of the surface acoustic wave device is within about ± 25 ppm/°C.

7. A surface acoustic wave device in accordance with claim 6, wherein the Euler angles of said quartz substrate are within the range such that the temperature coefficient of frequency TCF of the surface acoustic wave device is within about ± 5 ppm/°C.

8. A surface acoustic wave device in accordance with claim 1, wherein the Euler angles of said quartz substrate are within the range such that the electromechanical coupling coefficient for the Rayleigh wave, K^2 is not smaller than about 0.8%.

9. A surface acoustic wave device in accordance with

claim 1, wherein the Euler angles of said quartz substrate are within the range such that the electromechanical coupling coefficient for a spurious wave K_{sp}^2 is not larger than about 0.1%.

10. A surface acoustic wave device in accordance with claim 1, wherein the temperature coefficient of frequency, TCF of said piezoelectric thin film has a negative value.

11. A surface acoustic wave device in accordance with claim 1, wherein the Euler angles of said quartz substrate are within the range such that the difference in the power flow angle, ΔPFA between the surface acoustic wave to be utilized and the unwanted surface acoustic wave not to be utilized is within about ± 1°.

12. A surface acoustic wave device in accordance with claim 1, wherein said piezoelectric thin film is made of a material selected from the group consisting of ZnO, AlN, Ta_2O_5, and CdS.

13. A surface acoustic wave device according to claim 1, wherein the angle ϕ of the Euler angles (ϕ, θ, ψ) is within a range of -35° to +35°.